Amendments to the Claims:

The listing of the claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

1. (currently amended) A method of manufacturing a product comprising ~~for performing a height mapping of~~ an object ~~with respect to a reference surface~~, the method comprising ~~the steps of~~:

providing an uninspected product;

determining a fringe contrast function M(x,y) resulting from imaging of a projection of an intensity pattern;

projecting said intensity pattern on said object at a first position relative to said object to obtain~~ing~~ a first intensity characterizing said object, ~~said object on which is projected an intensity pattern characterized by a fringe contrast function M(x,y), and said intensity pattern being located at a first position relatively to the object~~;

projecting said intensity pattern on said object at a second position relative to said object to obtaining a second intensity characterizing said object, ~~said object on which is projected said intensity pattern at a second position shifted from said first position~~;

calculating a phase value characterizing the object using said first and second intensities and said fringe contrast function M(x,y);

obtaining a ~~the~~ height mapping of the object by comparing the phase value to a reference phase value associated with a ~~to the~~ reference surface; and~~.~~

releasing or recycling the product as a function of the height mapping.

2. (currently amended) The method as claimed in claim 1, wherein ~~said~~ obtaining said first and second intensities comprises ~~projecting~~ acquiring images of said intensity pattern projected onto said object and measuring said first and second intensities from pixel values of said images.

3. (original) The method as claimed in claim 1, wherein said height mapping comprises the relief of the object.

4. (original) The method as claimed in claim 1, wherein said reference phase value comprises a phase value generated from the extrapolation of a portion of the phase value characterizing the object.

5. (original) The method as claimed in claim 1, wherein said reference phase value comprises a computer generated virtual phase value.

6. (original) The method as claimed in claim 1, wherein said reference surface corresponds to a model object similar to said object, and further wherein said obtaining the height mapping comprises detecting defects between said model object and said object.

7. (original) The method as claimed in claim 1, wherein said object is the object at time *t* and said reference surface is the object surface at a previous time

t-r , and further wherein said obtaining the height mapping comprises detecting the variation of the object surface with respect to time.

8. (original) The method as claimed in claim 1, wherein said intensity characterizing the object comprises visible light intensity.

9. (original) The method as claimed in claim 1, wherein said intensity pattern comprises a sinusoidal pattern.

10. (original) The method as claimed in claim 1, wherein the shift in said second position comprises a 90 degrees shift from said first position.

11. (original) The method as claimed in claim 1, wherein the shift in said second position comprises a 180 degrees shift from said first position.

12. (original) The method as claimed in claim 11 further comprising adding said first and second intensity thereby obtaining an image of said object without said pattern.

13. (original) The method as claimed in claim 1 further comprising projecting said intensity along a projection axis that is inclined at an angle θ relatively to a detection axis, wherein said detection axis is the direction along which said first and second intensities are obtained.

14. (original) The method as claimed in claim 1 further comprising choosing the intensity pattern in accordance with the height of the object to thereby obtain the height mapping of the whole object.

15. (original) The method as claimed in claim 14 wherein said choosing comprises adjusting an angle θ between a projecting axis and a detection axis, wherein said projecting axis is parallel to the direction along which said intensity pattern is projected, and wherein said detection axis is parallel to the direction along which said first and second intensities are acquired.

16. (original) The method as claimed in claim 1 wherein said obtaining said first and second intensities comprises providing an acquisition resolution in accordance with a desired height mapping of the object.

17. (original) The method as claimed in claim 1 further comprising obtaining the height mapping of a portion of said object, said portion corresponding to an object layer.

18. (currently amended) The method as claimed in claim 1 further comprising projecting said intensity pattern at at least another position shifted from said first and second positions to obtaining at least another intensity characterizing said object~~, said object on which said intensity pattern is projected at at least another position shifted from said first and second positions~~.

19. (original) The method as claimed in claim 18 further comprising selecting, among said first intensity, said second intensity, and said at least another intensity, at least two intensities.

20. (original) The method as claimed in claim 19, wherein said selecting comprises choosing portions of said intensities.

21. (original) The method as claimed in claim 19 wherein said selecting comprises choosing intensities according to at least one given criteria.

22. (original) The method as claimed in claim 20 wherein said selecting comprises choosing at least one of said intensities and said portions of said intensities according to at least one given criteria.

23. (currently amended) The method as claimed ~~in claim~~ in claim 19, wherein said obtaining further comprises averaging said at least two intensities.

24. (original) The method as claimed in claim 19 further comprising adding said selected intensities thereby obtaining an image of said object without said pattern.

26. (original) The method as claimed in claim 1 further comprising:

determining a difference between said height mapping of the object and a reference height mapping value;

using said difference to assess a quality of said object.

27. (original) The method as claimed in claim 1 further comprising evaluating the volume of said object from said height mapping.

28. (original) The method as claimed in claim 27 further comprising:

determining a difference between said object volume and a reference volume;

using said difference to assess a quality of said object.

29. (original) A system for performing a height mapping of an object with respect to a reference surface, the system comprising:

a pattern projection assembly for projecting, onto the object, an intensity pattern characterized by a fringe contrast function M(x,y);

displacement means for positioning, at selected positions, said intensity pattern relative to said object;

a detection assembly for acquiring an intensity characterizing said object for each selected positions of said pattern relative to said object;

computing means for calculating a phase value characterizing the object using said intensity acquired for said each selected positions; and further determining the height mapping of the object by comparing the phase value to a reference phase value associated to the reference surface.

30. (original) The system as claimed in claim 29, wherein said pattern projection assembly comprises an illuminating assembly, a pattern, and optical elements for providing said intensity pattern.

31. (original) The system as claimed in claim 29 wherein said detection assembly comprises a detection device and optical devices for acquiring said intensity characterizing said object.

32. (original) The system as claimed in claim 29, wherein said detection assembly comprises a CCD camera.

33. (currently amended) The system as claimed in claim 29, wherein said displacement means comprises a mechanical displacement device.

34. (original) The system as claimed in claim 29, wherein said computing means comprises a computer.

35. (original) The system as claimed in claim 29 further comprising a controller for controlling at least one of said pattern projection assembly, said displacement means, said detection assembly, or said computing means.

36. (original) The system as claimed in claim 29 further comprising storage means for storing, as images, at least one of said intensity characterizing said object, said phase value characterizing said object, and said reference value.

37. (original) The system as claimed in claim 36 further comprising managing means for managing said images.

38. (original) The system as claimed in claim 35, wherein said controller comprises adjusting characteristics of said intensity pattern.

39. (original) The system as claimed in claim 35, wherein said controller comprises adjusting the positioning of said intensity pattern relative to said object.

40. (original) The system as claimed in claim 35, wherein said controller comprises adjusting the shifting of said intensity pattern from a previous position relative to said object to a desired position relative to said object, wherein said object is at a fixed position.

41. (original) The system as claimed in claim 35 wherein said controller comprises controlling the optical characteristics of said detection assembly.

42. (original) The system as claimed in claim 35 further comprising an interface to manage said controller system.

43. (original) The system as claimed in claim 35 further comprising storage means for storing, as images, at least one of said intensity characterizing said object, said phase value characterizing said object, and said reference value.

44. (original) The system as claimed in claim 43 further comprising managing means for managing said images.

45. (new) A method of manufacturing a product comprising:

determining a fringe contrast function M(x,y) resulting from imaging of a projection of an intensity pattern using inspection equipment for inspecting an object of said product, said fringe contrast function M(x,y) allowing height information of said object to be obtained when said intensity pattern is in only two positions relative to said object;

releasing or recycling the product as a function of the height information of said object.